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ENGINEERING EVALUATION / FACT SHEET

BACKGROUND INFORMATION

Application No.: R13-2801C
Plant ID No.: 091-00030
Applicant: ICG Tygart Valley, LLC
Facility Name: Leer Preparation Plant
Location: Grafton, Taylor County, WV
SIC Codes: 1222 (Bituminous Coal & Lignite - Underground)
1221 (Bituminous Coal & Lignite - Surface)
NAICS Codes: 212112 (Bituminous Coal Underground Mining)
212111 (Bituminous Coal and Lignite Surface Mining)
Application Type: Modification
Received Date: January 9, 2014
Engineer Assigned: Dan Roberts
Fee Amount: \$2,000
Date Received: January 13, 2014
Complete Date: March 7, 2014
Applicant's Ad Date: January 13, 2014
Newspaper: *Mountain Statesman*
UTM's: Easting: 589.1957 km Northing: 4,354.404 km Zone: 17
Description: Modification to do the following: increase the maximum capacity and base area of raw coal open storage piles OS1, OS2 and OS3; increase the throughput rate for raw coal screen S1 from 1,500 TPH to 2,000 TPH; increase the throughput rates for raw coal crusher CR1 from 500 TPH and 2,847,000 TPY to 2,000 TPH and 9,198,000 TPY; increase the raw coal prep plant feed rate from 1,400 TPH and 11,388,000 TPY to 2,000 TPH and 13,140,000 TPY; increase the maximum capacity of clean coal open storage piles OS4, OS5 and OS6; increase the refuse throughput rates from 600 and 650 TPH to 1,100 and 1,150 TPH; increase the maximum hourly throughput hauled by refuse trucks from 15 trips per hour to 30 trips per hour; and include as-built corrections because magnetite bins BS3 and BS4 were previously permitted with 50 tons capacity each but actually have 100 ton capacity each.

BACKGROUND

ICG Tygart Valley, LLC is operating their existing facility under permit R13-2801B approved on March 14, 2013. This facility was formerly known as and permitted as the Tygart Valley Preparation Plant but is now known as the Leer Preparation Plant.

DESCRIPTION OF PROCESS

CONSTRUCTION - JANUARY 2010

Raw coal will be conveyed (BC1/PE) from a deep mine and transferred (TP1/PE) to conveyor BC2/PE for transfer (TP2/ST) to stockpile OS2/N, or to BC3/PE or BC3A/PE for transfer (TP3/PE-ST) to OS1/N or OS3/N. Raw coal from stockpiles OS1/N, OS2/N and OS3/N will be reclaimed by under pile conveyor BC4/PE (TP4/FE) and sent to the crushing and screening building for transfer (TP5/FE) to screen S1/FE, where +4" material will be scalped off (TP8/FE) to conveyor BC16/PE, 4" x 2" material will be sent (TP7/FE) to sizer CR1/FE and 2" x 0 material will pass through (TP6/FE) to conveyor BC5/PE. Sized material will exit CR1/FE through TP9/FE to BC5/PE. The screened and sized raw coal will be conveyed (BC5/PE) to the preparation plant and transferred (TP10/FE) to the wet wash circuit.

Clean coal will exit the wet wash circuit (TP11/FE) to transfer belt (BC6/FE) and will be transferred (TP12/FE) to clean coal belt BC9/PE or to clean coal belt BC7/PE. Clean coal will exit the wet wash circuit directly to BC7/PE (TP13/FE) or to clean coal belt BC8/PE (TP14/FE). BC7/PE will transfer (TP15/FE) to clean coal stockpile OS4/N, BC8/PE (TP16/ST) to clean coal stockpile OS5/N and BC9/PE (TP17/ST) to clean coal stockpile OS6/N. The clean coal stockpiles OS4/N, OS5/N and OS6/N will be reclaimed (TP18/FE) by under pile reclaim conveyor BC10/PE and transferred (TP19/PE) to BC11/PE, then transferred (TP20/FE) to the unit train batch loadout system BS1/FE for transfer (TP21/MD) to railcar. BS1/FE will be a fully enclosed system consisting of a 300 ton surge bin and a 125 ton weigh bin. The system will operate at a maximum of up to 4,000 TPH. A two stage sampler/elemental analyzer will be attached to the loadout belt BC11/PE. Clean coal will be transferred from BC11/PE (TP19A/PE) to a 5 TPH Jeffery crusher (CR2/FE) and reduced to 8 mesh, then transfers (TP19B/FE) to BC11A/PE, to conveyor BC11B/FE (TP19C/PE) which is part of the analyzer. From the analyzer, the coal will transfer (TP19D/FE) to conveyor BC11C/PE and back to BC11/PE (TP19E/PE).

Refuse material will exit the crushing and screening building on BC16/PE and will be transferred (TP28/PE) to BC17/PE and then join (TP29/PE) BC13/PE. Refuse from the preparation plant will exit it on conveyor BC12/PE (TP22/FE) to BC13/PE (TP23/PE). Refuse will be transferred from BC13/PE to BC14/PE (TP24/PE) and BC15/PE (TP25/PE), then to the 600 ton refuse bin BS2/FE (TP26/PE). BS2/FE will transfer (TP27/MD) refuse to trucks for transport to the refuse pile. In the event that any of the overland refuse conveyors BC13/PE, BC14/PE and/or BC15/PE should go down, BC12/PE will have an emergency by-pass gate (TP23/PE) installed to drop refuse to storage pile OS8/N. OS8/N will have a maximum storage capacity of 300 tons, which would be picked up and transported to the lime sand bins (BS5/PE, BS6/PE) for re-incorporation into

the refuse stream (TP32/MD) once the refuse conveyors are returned to service. Trucks or endloaders will place the refuse into BS5/PE or BS6/PE.

Trucks will transport lime sand or limestone sand to a stockpile (OS7/N, TP33/MD) which supplies (TP32/MD) two (2) 150 ton bins, BS5/PE and BS6/PE, for transfer (TP30/PE) to conveyor BC18/PE for transfer (TP31/PE) to the refuse stream on BC17/PE. Coal emission factors are used in the emissions estimate for these transfer points. BS5/PE and BS6/PE may be filled by either trucks or endloaders.

Raw coal and clean coal may be trucked onto or off of the site (TP34/MD) at up to 1,000,000 TPY. The haulroads are gravel and dust will be controlled by water sprays/trucks.

Magnetite will be trucked onto the site and pneumatically transferred to two (2) 50 ton storage bins (BS3/BH, BS4/BH) and conveyed to the wet wash process by four (4) screw conveyors (SC1, SC2, SC3 and SC4). Emissions from the storage bin transfers will be controlled by a Stephens SV-265 filter vent on each bin.

CLASS II ADMINISTRATIVE UPDATE - SEPTEMBER 2011

ICG Tygart Valley, LLC proposes to install and operate a temporary vertical bucket conveyor, one (1) temporary screen, two (2) temporary belt conveyors and two (2) temporary stockpiles for the purpose of mine shaft development. The temporary equipment will operate until mine development is complete and the preparation plant becomes operational. The temporary equipment will not operate simultaneously with the existing permitted preparation plant screen and conveyors resulting in no change to the potential to emit for the facility. The temporary equipment will remove material from the mine development via a bucket elevator (TBE1) to scalping screen TS1/FE or TS1/PW at transfer point TTP1/N. Pass through coal (TTP2/PE) will be sent by belt conveyor TBC1/PE to raw coal stockpile TSP1/N at TTP4/N. Scalped rock (TTP3/PE) is sent on belt conveyor TBC2/PE to refuse stockpile TSP2/N at TTP5/N. Material from stockpiling is loaded to trucks at TTP6/MDH for transport offsite (coal) or to the onsite slurry cell (rock). The facility expects to process 400,000 tons of material with approximately 70% coal removed from the operation.

CLASS II ADMINISTRATIVE UPDATE - JANUARY 2013

ICG Tygart Valley, LLC proposes to increase the Leer (formerly known as Tygart Valley) Preparation Plant feed rate from 1,300 tons per hour (tph) to 1,400 tph (TP10/PE), with no change to the yearly throughput. The facility also proposes to add a bar grate to separate rock from soil or coal. The bar grate (BG1/N) is not powered. Endloaders drop material onto BG1/N (TP35/MDH) where the rock is separated by the bars and falls to ground (TP37/MD). The smaller material passes through the bars and falls to ground (TP36/MDH). The materials are picked up by endloader and transferred to existing trucking (TP34/MDH). The bar grate is proposed to operate at 500 tph and 500,000 tons per year (tpy). The bar grate may be located anywhere on the facility property.

In addition, the as-built facility transfers raw coal as follows: BC2/PE transfers (TP2/PE-ST)

to OS1/N or BC3/PE, then to OS2/N or BC3A/PE (TP3/PE-ST), then to OS3/N (TP3A/ST). TP3A/ST is a new transfer point and the facility transfer point emissions have been updated.

MODIFICATION - JANUARY 2014

ICG Tygart Valley, LLC proposes to increase the raw coal plant feed rate from 1,400 tons per hour (TPH) to 2,000 tons per year (TPH). In addition, the raw coal crusher CR1/FE will increase its maximum throughputs from 500 TPH and 2,847,000 TPY to 2,000 TPH and 9,198,000 TPY. The hourly rate of refuse conveying is proposed to increase from 600 and 650 TPH to 1,100 and 1,150 TPH. The equipment with the revised rates is shown in Attachments I, L and N. The refuse increase results in additional hourly refuse trucking.

Also, the base area of raw coal stockpiling is proposed to increase along with an increase in the amounts of raw and clean coal in storage. For emissions purposes, the base areas of raw coal stockpiles OS1, OS2 and OS3 will be combined and clean coal stockpiles OS4, OS5 and OS6 will be combined. This modification does not include the addition of new equipment. There are as-built revisions to the capacities of magnetite bins BS3 and BS4 from 50 tons each to 100 tons each.

Also within this application, ICG Tygart Valley is requesting to remove the temporary equipment which was originally permitted in 2011 and to only be used during development of the mine shaft. The temporary equipment was permitted to operate until mine development was complete and the preparation plant became operational. The temporary equipment was not operate simultaneously with the existing permitted preparation plant screen and conveyors resulting in no change to the potential to emit for the facility. Since the preparation plant has been in operation for some time now, the temporary equipment will be removed from the permit. The equipment being removed includes the following: vertical bucket belt TBE1; scalping screen TS1; belt conveyors TBC1 and TBC2; and open storage piles TSP1 and TSP2.

This facility mainly processes deep mined underground, but has the capability to process coal from off site sources. The NAICS code of 212112 (Bituminous Coal Underground Mining) has been added with this application in addition to the currently listed NAICS of 212111 (Bituminous Coal and Lignite Surface Mining).

The facility shall be modified and operated in accordance with the following equipment and control device information taken from permit application R13-2801C, R13-2801B, R13-2801A, R13-2801 and any amendments thereto:

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	Description	Maximum Capacity		Control Equip- ment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ²
Bar Grate Circuit								
BG1	C 2013	Bar grate will separate rock from soil or coal. Material is loaded into bar grate by endloader, rock is separated and drops to ground, smaller material passing through grate drops to ground. Endloader loads separated material to trucks for transport to their respective destinations.	500	500,000	N	B A A A	TP35 TP36 TP37 TP34	MDH MDH MDH MDH

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	Description	Maximum Capacity		Control Equip- ment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ²
Raw Coal Circuit								
BC1	M 2010	Slope Conveyor - receives raw coal from the deep mine and transfers it to BC2	7,600	13,140,000	PE	A	TP1	PE
BC2	M 2010	Storage Conveyor - receives raw coal from BC1 and transfers it to OS1 or BC3	7,600	13,140,000	PE	B A	TP1 TP2	PE PE
OS1	M 2014 M 2010	Raw Coal Open Stockpile with Stacking Tube - 140,000 tons maximum capacity and 51,667 ft² base area - 50' maximum height - receives raw coal from BC2, stores it and then it is reclaimed to under pile conveyor BC4. Raw and clean coal may be delivered to and shipped from all open stockpiles via trucks up to 1,000,000 TPY combined.	-----	13,140,000 combined ³	N	B A	TP2 TP4	ST FE
BC3	M 2010	Raw Coal Transfer Belt - receives raw coal from BC2 and transfers it to OS2	7,600	13,140,000	PE	B A	TP2 TP3	PE ST
OS2	M 2014 M 2010	Raw Coal Open Stockpile with Stacking Tube - 140,000 tons maximum capacity and 51,667 ft² base area - 50' maximum height - receives raw coal from BC3, stores it and then it is reclaimed to under pile conveyor BC4. Raw and clean coal may be delivered to and shipped from all open stockpiles via trucks up to 1,000,000 TPY combined.	-----	13,140,000 combined ³	N	B A	TP2 TP4	PE FE
BC3A	M 2010	Raw Coal Transfer Belt - receives raw coal from BC3 and transfers it to OS3	7,600	13,140,000	PE	B A	TP2 TP3A	PE ST
OS3	M 2014 M 2010	Raw Coal Open Stockpile with Stacking Tube - 140,000 tons maximum capacity and 51,667 ft² base area - 50' maximum height - receives raw coal from BC3A, stores it and then it is reclaimed to under pile conveyor BC4. Raw and clean coal may be delivered to and shipped from all open stockpiles via trucks up to 1,000,000 TPY combined.	-----	13,140,000 combined ³	N	B A	TP3A TP4	ST FE
BC4	M 2014 M 2010	Raw Coal Reclaim Belt - receives raw coal OS1, OS2 and OS3 and transfers it to S1	2,000	13,140,000	PE	B A	TP4 TP5	FE FE
S1	M 2014 M 2010	Double Deck Screen - receives raw coal from BC4 and classifies it. +4" material is scalped off to BC16 (see Refuse Circuit). 4" x 2" material drops to CR1. 2" x 0 passes through to BC5.	2,000	13,140,000	FE	B A A A	TP5 TP6 TP7 TP8	FE FE FE FE
CR1	M 2014 M 2010	Primary Raw Coal Sizer - receives 4" x 2" raw coal, crushes it to 2" x 0 and then drops it to BC5	2,000	9,198,000	FE	B A	TP7 TP9	FE FE
BC5	M 2014 M 2013	Plant Feed Belt - receives sized raw coal from CR1 and S1 and transfers it to wet wash plant	2,000	11,388,000	PE	B A	TP6 TP10	FE FE
Refuse Circuit								
OS7	M 2010	Lime Sand Open Stockpile - 10,000 tons maximum capacity - receives lime sand from trucks and an endloader transfers it to BS5 or BS6	40 in 300 out	438,000	N	B A	TP33 TP32	MDH MDH
BS5	M 2010	150 ton Lime Sand Bin - receives lime sand from trucks or OS7 via an endloader and refuse from the emergency by-pass stockpile OS8 via an endloader and drops it to BC18	300 in 50 out	438,000 combined ⁴	PE	B A	TP32 TP30	MDH PE
BS6	M 2010	150 ton Lime Sand Bin - receives lime sand from trucks or OS7 via an endloader and refuse from the emergency by-pass stockpile OS8 via an endloader and drops it to BC18	300 in 50 out	438,000 combined ⁴	PE	B A	TP32 TP30	MDH PE
BC18	M 2010	Lime Sand Belt - receives lime sand and refuse from BS5 and BS6 and transfers it to BC17	50	438,000	PE	B A	TP30 TP31	PE PE
BC16	M 2014 M 2010	Refuse Collection Belt - receives coal refuse from S1 (see Raw Coal Circuit) and transfers it to BC17	1,100	5,256,000	PE	B A	TP8 TP28	FE PE
BC17	M 2014 M 2010	Reject By-Pass Conveyor - receives coal refuse from BC16 and lime sand and refuse from BC18 transfers it to BC13	1,150	5,256,000	PE	B B A	TP28 TP31 TP29	PE PE PE
BC12	M 2014 M 2010	Refuse Collection Belt - receives refuse from the wet wash plant and transfers it to BC13 or OS8 through the emergency by-pass gate	1,100	5,256,000	PE	B A	TP22 TP23	FE PE

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	Description	Maximum Capacity		Control Equip- ment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ²
OS8	M 2010	Emergency Refuse Open Stockpile - 300 tons maximum capacity - receives refuse from BC12, stores it and then it is reclaimed by an endloader to BS5 or BS6	----	Emergency only	N	B A	TP23 TP32	PE MDH
BC13	M 2014 M 2010	Refuse Belt - receives refuse and lime sand from BC12 and BC17 and transfers it to BC14	1,150	5,256,000	PE	B B A	TP23 TP29 TP24	PE PE PE
BC14	M 2014 M 2010	Refuse Belt - receives refuse and lime sand from BC13 and transfers it to BC15	1,150	5,256,000	PE	B A	TP24 TP25	PE PE
BC15	M 2014 M 2010	Refuse Belt - receives refuse and lime sand from BC14 and transfers it to BS2	1,150	5,256,000	PE	B A	TP25 TP26	PE PE
BS2	M 2010	600 ton Refuse Bin - receives refuse and lime from BC15, stores it and then drops it to trucks	650	5,256,000	FE	B A	TP26 TP27	PE MDH
Magnetite Circuits								
BS3	M 2010	100 ton Magnetite Bin #1 - pneumatically receives magnetite from trucks and vents to BH1, stores it and the feeds screw conveyors SC1 and SC2	----	5,694 combined ⁵	FE, BH1	N/A		
BH1	M 2010	Stevens SV-265 Filter Vent - 99.6% collection efficiency	----	----	----	N/A		
SC1	M 2010	Screw Conveyor - receives magnetite from BS3 and transfers it to the wet wash circuit	0.65	5,694	FE	N/A		
SC2	M 2010	Screw Conveyor - receives magnetite from BS3 and transfers it to the wet wash circuit	0.65	5,694	FE	N/A		
BS4	M 2010	100 ton Magnetite Bin #2 - pneumatically receives magnetite from trucks and vents to BH2, stores it and the feeds screw conveyors SC3 and SC4	----	5,694 combined ⁵	FE, BH2	N/A		
BH2	M 2010	Stevens SV-265 Filter Vent - 99.6% collection efficiency	----	----	----	N/A		
SC3	M 2010	Screw Conveyor - receives magnetite from BS3 and transfers it to the wet wash circuit	0.65	5,694	FE	N/A		
SC4	M 2010	Screw Conveyor - receives magnetite from BS3 and transfers it to the wet wash circuit	0.65	5,694	FE	N/A		
Clean Coal Circuit								
BC6	M 2010	Clean Coal Transfer Belt - receives clean coal from the wet wash plant and transfers it to BC7, BC8 or BC9	1,100	9,636,000	FE	B A	TP11 TP12	FE FE
BC7	M 2010	Clean Coal Belt - receives clean coal from BC6 and transfers it to OS4	1,100	9,636,000	PE	B A	TP13 TP15	FE ST
OS4	M 2014 M 2010	Clean Coal Open Stockpile with Stacking Tube - 60,000 tons maximum capacity and 50,000 ft² base area - 50' maximum height - receives clean coal from BC7, stores it and then it is reclaimed to under pile conveyor BC10. Raw and clean coal may be delivered to and shipped from all open stockpiles via trucks up to 1,000,000 TPY combined.	----	9,636,000 combined ⁶	N	B A	TP15 TP18	ST FE
BC8	M 2010	Clean Coal Belt - receives clean coal from BC6 and transfers it to OS5	1,100	9,636,000	PE	B A	TP14 TP16	FE ST
OS5	M 2014 M 2010	Clean Coal Open Stockpile with Stacking Tube - 60,000 tons maximum capacity and 50,000 ft² base area - 50' maximum height - receives clean coal from BC8, stores it and then it is reclaimed to under pile conveyor BC10. Raw and clean coal may be delivered to and shipped from all open stockpiles via trucks up to 1,000,000 TPY combined.	----	9,636,000 combined ⁶	N	B A	TP16 TP18	ST FE
BC9	M 2010	Clean Coal Belt - receives clean coal from BC9 and transfers it to OS6	1,100	9,636,000	PE	B A	TP12 TP17	FE ST
OS6	M 2014 M 2010	Clean Coal Open Stockpile with Stacking Tube - 60,000 tons maximum capacity and 50,000 ft² base area - 50' maximum height - receives clean coal from BC9, stores it and then it is reclaimed to under pile conveyor BC10. Raw and clean coal may be delivered to and shipped from all open stockpiles via trucks up to 1,000,000 TPY combined.	----	9,636,000 combined ⁶	N	B A	TP17 TP18	ST FE

Equip- ment ID No.	Date of Construction, Reconstruction or Modification ¹	Description	Maximum Capacity		Control Equip- ment ²	Associated Transfer Points		
			TPH	TPY		Location: B -Before A -After	ID. No.	Control Equip- ment ²
BC10	M 2010	Clean Coal Reclaim Belt - receives clean coal from OS4, OS5 and OS6 and transfers it to BC11	4,000	9,636,000	PE	B A	TP18 TP19	FE PE
BC11	M 2010	Loadout Conveyor - receives clean coal from BC10 and transfers it to sampler crusher CR2 and BS1	4,000	9,636,000	PE	B A A	TP19 TP19A TP20	PE PE FE
CR2	M 2010	Jeffrey Crusher (Sampler System) - receives clean coal from BC11, crushes it to 8 mesh, and then drops it to BC11A	5	43,800	FE	B A	TP19A TP19B	PE FE
BC11A	M 2010	Belt Conveyor (Sampler System) - receives clean coal from CR2 and transfers it to BC11B	5	43,800	PE	B A	TP19B TP19C	FE PE
BC11B	M 2010	Analyzer Conveyor (Sampler System) - receives clean coal from BC11A, analyzes it and transfers it to BC11C	5	43,800	FE	B A	TP19C TP19D	PE FE
BC11C	M 2010	Belt Conveyor (Sampler System) - receives clean coal from BC11B and transfers it back to BC11	5	43,800	PE	B A	TP19D TP19E	FE PE
BS1	M 2010	425 ton Batch Weigh Loadout Bin - receives clean coal from BC11, weighs it and then loads it to railcars	4,000	9,636,000	FE	B A	TP20 TP21	FE MDH

¹ In accordance with 40 CFR 60 Subpart Y, coal processing and conveying equipment, coal storage systems, and coal transfer and loading systems constructed, reconstructed, or modified after April 28, 2008 shall not discharge gases which exhibit 10 percent opacity or greater. For open storage piles constructed, reconstructed, or modified after May 27, 2009, the permittee shall prepare and operate in accordance with a fugitive coal dust emissions control plan that is appropriate for site conditions.

² FE - Full Enclosure; FW - Full Enclosure with Water Sprays; PE - Partial Enclosure; PW - Partial Enclosure with Water Sprays; ST - Stacking Tube; BH - Baghouse; MDH - Minimum Drop Height; N - None; N/A - Not Applicable.

³ The maximum annual throughput in storage for raw coal stockpiles OS1, OS2 and OS3 combined is 13,140,000 TPY.

⁴ The maximum annual throughput in storage for lime sand bins BS5 and BS6 combined is 438,000 TPY.

⁵ The maximum annual throughput in storage for magnetite bins BS3 and BS4 combined is 5,694 TPY.

⁶ The maximum annual throughput in storage for clean coal stockpiles OS4, OS5 and OS6 combined is 9,636,000 TPY.

SITE INSPECTION

On June 14, 2012, Jamie Jarrett of the DAQ's Compliance and Enforcement Section performed a full-on targeted site inspection. Mr. Jarrett noted that the temporary equipment and the wet wash preparation plant were under construction. The tentative start-up date for the temporary equipment was June 22, 2012. The facility was not in operation at the time of the inspection and was assigned a status code of 41: Not in Operation.

The nearest residences from the bridge and access road to the facility are located 0.3 miles to the west and 0.35 miles to the east on US Route 50.

This facility will continue to be inspected on a regular basis by DAQ's Compliance and Enforcement Section personnel.

Directions from Charleston, WV, are to take I-79 North to Clarksburg, take the exit and then take US Route 50 East to Grafton. The facility will be located approximately 1.7 miles east from the traffic light at the intersection of US Route 50 and US Route 119 in Grafton and on the right hand (south) side of US Route 50 East across the bridge.

ESTIMATE OF EMISSIONS BY REVIEWING ENGINEER

Fugitive emission calculations for continuous and batch drop operations, transfer points, crushing and screening, storage piles, and paved and unpaved haulroads are based on AP-42 "Compilation of Air Pollution Emission Factors." Control efficiencies were applied based on "Calculation of Particulate Matter Emission - Coal Preparation Plants and Material Handling Operations." The emission factors for crushing/breaking and screening operations were obtained from the Air Pollution Engineering Manual - Air & Waste Management Association - June 1992. The emissions calculations were performed by the applicant's consultant using the DAQ's General Permit G10-C Emission Calculation Spreadsheet and were checked for accuracy and completeness by the writer. The increase in emissions calculations were performed by the writer using the DAQ's General Permit G10-C Emission Calculation Spreadsheet and a copy has been attached.

The proposed modification of this wet wash coal preparation plant and railcar loadout will result in an increase in the potential to discharge controlled particulate matter emissions of 85.46 pounds per hour (lb/hour) and 13.97 tons per year (TPY) of particulate matter (PM), of which 28.49 lb/hour and 6.57 TPY will be particulate matter less than 10 microns in diameter (PM₁₀).

Refer to the following table for a complete summary of the proposed increase in the facility's potential to discharge particulate matter emissions:

<i>- Increase in Emissions Summary - ICG Tygart Valley, LLC R13-2801C</i>	Change in Controlled PM Emissions		Change in Controlled PM₁₀ Emissions	
	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions				
Stockpile Emissions	0.06	0.26	0.03	0.12
Unpaved Haulroad Emissions	66.84	0.00	19.73	0.00
Paved Haulroad Emissions	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>66.90</i>	<i>0.26</i>	<i>19.76</i>	<i>0.12</i>
Point Source Emissions				
Equipment Emissions	16.00	12.70	7.52	5.97
Transfer Point Emissions	2.57	1.00	1.21	0.47
Magnetite Bins	0.00	0.00	0.00	0.00
Point Source Emissions Total (PTE)	<i>18.57</i>	<i>13.70</i>	<i>8.73</i>	<i>6.44</i>
INCREASE IN EMISSIONS	85.46	13.97	28.49	6.57

Refer to the following table for a complete summary of the new facility-wide potential to discharge particulate matter emissions:

-New Facility-wide Emissions Summary- ICG Tygart Valley, LLC R13-2801C	Controlled PM Emissions		Controlled PM ₁₀ Emissions		Controlled PM _{2.5} Emissions	
	lb/hour	TPY	lb/hour	TPY	lb/hour	TPY
Fugitive Emissions						
Stockpile Emissions	3.90	17.07	1.83	8.02	0.28	1.22
Unpaved Haulroad Emissions	601.26	633.72	123.73	128.77	18.39	19.38
Paved Haulroad Emissions	0.00	0.00	0.00	0.00	0.00	0.00
Fugitive Emissions Total	<i>605.16</i>	<i>650.79</i>	<i>125.56</i>	<i>136.80</i>	<i>18.67</i>	<i>20.60</i>
Point Source Emissions						
Equipment Emissions	48.02	149.88	22.57	70.45	3.43	10.71
Transfer Point Emissions	38.20	50.96	18.07	24.10	2.73	3.64
Magnetite Bins	0.04	0.12	0.02	0.08	0.01	0.01
Point Source Emissions Total (PTE)	<i>86.26</i>	<i>200.97</i>	<i>40.66</i>	<i>94.63</i>	<i>6.17</i>	<i>14.36</i>
NEW FACILITY-WIDE TOTAL						
	691.42	851.75	166.22	231.43	24.84	34.96

REGULATORY APPLICABILITY

NESHAPS and PSD have no applicability to the proposed modifications. The proposed modification of ICG Tygart Valley, LLC's wet wash coal preparation plant and railcar loadout is subject to the following state and federal rules:

45CSR5 *To Prevent and Control Air Pollution from the Operation of Coal Preparation Plants, Coal Handling Operations and Coal Refuse Disposal Areas*

The facility is subject to the requirements of 45CSR5 because it meets the definition of "Coal Preparation Plant" found in subsection 45CSR5.2.4. The facility should be in compliance with Section 3 (less than 20% opacity) and Section 6 (fugitive dust control system and dust control of the premises and access roads) when the particulate matter control methods and devices proposed within application R13-2801C and any amendments thereto are in operation.

45CSR13 *Permits for Construction, Modification, Relocation and Operation of Stationary Sources of Air Pollutants, Notification Requirements, Temporary Permits, General Permits, and Procedures for Evaluation*

The proposed modification is subject to the requirements of 45CSR13 because it will result in an increase in controlled emissions greater than six (6) pounds per hour and ten (10) tons per year of a regulated air pollutant (PM) and involve the modification of existing equipment subject to NSPS Subpart Y. The applicant has submitted an application for a modification to their existing permit. The applicant published a Class I legal advertisement in the *Mountain Statesman* on January 13, 2013 and submitted \$1,000 for the application fee and \$1,000 for the NSPS fee.

45CSR16 Standards of Performance for New Stationary Sources
40 CFR 60 Subpart Y: Standards of Performance for Coal Preparation Plants

This existing wet wash coal preparation plant and railcar loadout is subject to 40 CFR 60 Subpart Y because it was constructed and will be modified after October 24, 1974 and processes more than 200 tons of coal per day. The proposed changes include the modification of one (1) screen, one (1) crusher, eight (8) belt conveyors and six (6) open storage piles, which are defined as affected facilities in 40 CFR 60 Subpart Y. The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage system, or coal transfer and loading system processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation. Therefore, the proposed modification is subject to 45CSR16, which incorporates by reference 40 CFR 60 Subpart Y - Standards of Performance for Coal Preparation and Processing Plants. The facility must submit a fugitive coal dust emissions control plan as required by 40CFR§60.254(c)(2) after permit issuance.

The facility should be in compliance with Section 254(b) (less than 10% opacity for coal processing and conveying equipment, coal storage systems, or coal transfer and loading systems processing coal constructed, re-constructed or modified after April 28, 2008) when the particulate matter control methods and devices proposed are in operation.

The owner or operator of an open storage pile, which includes the equipment used in the loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

45CSR30 Requirements for Operating Permits

In accordance with 45CSR30 Major Source Determination, this wet wash coal preparation plant is not listed in 45CSR30 subsection 2.26.b as one of the categories of stationary sources which must include fugitive emissions (open storage piles constructed or modified on or before May 27, 2009 and haulroads) when determining whether it is a major stationary source for the purposes of § 302(j) of the Clean Air Act. The facility's new potential to emit will be 94.63 TPY for PM₁₀ (open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR30 threshold of 100 TPY of a regulated air pollutant used to define a major stationary source. Therefore, the facility will be subject to 45CSR30 and remain classified as a Title V deferred non-major source.

The proposed modification of ICG Tygart Valley, LLC's wet wash coal preparation plant and railcar loadout is not subject to the following state and federal rules:

45CSR14 Permits for Construction and Major Modification of Major Stationary Sources of Air Pollution for the Prevention of Significant Deterioration

In accordance with 45CSR14 Major Source Determination, this wet wash coal preparation plant is not one of the 100 TPY stationary sources listed under the definition of “Major Stationary Source” in subsection 2.43.a. Therefore, it must have the potential to emit 250 TPY or more of any regulated pollutant to meet the definition of a major source in subsection 2.43.b. At the end of subsection 2.4.3, this facility is not listed in Table 1 - Source Categories Which Must Include Fugitive Emissions. So, fugitive emissions (from open storage piles constructed or modified on or before May 27, 2009 and haulroads) are not included when determining major stationary source applicability. The facility’s new potential to emit will be 200.97 TPY for PM (open storage piles constructed or modified after May 27, 2009 and point sources combined), which is less than the 45CSR14 threshold of 250 TPY for a regulated air pollutant used to define a major stationary source. Therefore, the proposed modification is not subject to the requirements set forth within 45CSR14.

TOXICITY OF NON-CRITERIA REGULATED POLLUTANTS

A toxicity analysis was not performed because the pollutants being emitted from this facility will be PM (particulate matter) and PM₁₀ (particulate matter less than 10 microns in diameter), which are non-toxic pollutants.

AIR QUALITY IMPACT ANALYSIS

Air dispersion modeling was not performed due to the size and proposed location of this facility. This existing facility is located in Taylor County, WV, which is currently in attainment for PM (particulate matter), PM₁₀ (particulate matter less than 10 microns in diameter) and PM_{2.5} (particulate matter less than 2.5 microns in diameter).

MONITORING OF OPERATIONS

For the purposes of determining compliance with maximum throughput limits, the applicant shall maintain certified daily and monthly records. An example form is included as Appendix A to Permit R13-2801C. An example form for tracking the amount of water applied through the water truck is included as Appendix B to Permit R13-2801C. The Certification Of Data Accuracy statement shall be completed within fifteen (15) days of the end of the reporting period. These records shall be maintained on site by the permittee for at least five (5) years and shall be made available to the Director of the Division of Air Quality or his or her duly authorized representative upon request.

The owner or operator of an open storage pile, which includes the equipment used in the

loading, unloading, and conveying operations of the affected facility, constructed, reconstructed, or modified after May 27, 2009, must prepare and operate in accordance with a submitted fugitive coal dust emissions control plan that is appropriate for the site conditions. The fugitive coal dust emissions control plan must identify and describe the control measures the owner or operator will use to minimize fugitive coal dust emissions from each open storage pile. The plan must be submitted to the Director prior to startup of the new, reconstructed or modified open storage pile.

RECOMMENDATION TO DIRECTOR

The information contained in this modification permit application indicates that compliance with all applicable regulations should be achieved when all of the proposed particulate matter control methods are in operation. Due to the location, nature of the process, and control methods proposed, adverse impacts on the surrounding area should be minimized. Therefore, the granting of a permit to ICG Tygart Valley, LLC for the modification of their existing wet wash coal preparation plant and railcar loadout located on an access road off of US Route 50 approximately 2 miles east of Grafton, Taylor County, WV is hereby recommended.

Daniel P. Roberts, Engineer Trainee
NSR Permitting Section

March 12, 2014
Date